

LISTING OF THE CLAIMS

This Listing of Claims replaces all prior versions, and listings, of claims in the application.

1. (Previously Presented) A method of providing multilevel information about video-on-demand services, comprising the steps:

providing a video-on-demand service system, said system including a multitude of servers for storing video data, a multitude of customers for receiving said video data and viewing said video data on customer video monitors, and a system administrator for configuring and monitoring connections between said servers and said customers, and wherein said multitude of customers are able to choose interactively various programs from a video-on-demand service provider and can view a selected program at any time on the customer video monitors;

generating a display, on a computer display screen, of a tree having a plurality of nodes, including displaying video usage patterns of the customers; and

embedding in the nodes information about the video-on-demand services provided to said multitude of customers, including the step of said system administrator interacting with said nodes of said display to configure and to monitor the connections between said servers and said customer video monitors; and

wherein, when one of the customers requests a video program, the system administrator interacts with the nodes of the display (i) to select one of the servers to provide the requested video program to said one of the customers and (ii) to assign to said one of the customers one or more of a multitude of video data channels to configure a video data path

between the selected one of the servers and the video monitor of said one of the customers for transmitting the requested video program from said selected one of the servers to the video monitor of said one of the customers for viewing by said one of the customers, and wherein commercials are provided with the video program, and the commercials are selected based on the displayed video usage patterns.

2. (Previously Presented) A method according to Claim 1, wherein the embedding step includes the steps of:

identifying in a first catalog each of a group of first aspects of video-on-demand services;

identifying in a second catalog each of a group of second aspects of video-on-demand services;

forming a matrix from the first and second groups; and

embedding the matrix in one of the nodes.

3. (Cancelled).

4. (Original) A method according to Claim 1, wherein the embedding step includes the step of embedding information in the nodes in the form of matrices.

5. (Original) A method according to Claim 4, wherein the matrices are used to display information about an aspect of video-on-demand service selected from the group comprising:

usage patterns between the supplier of the video services and the consumer, a list of users, user statistics, satisfaction rates, failure rates, failure causes, rates of view to completion, cost monitor information, customer payment information, menus of videos, charge variations, special features and offers, user age, user education, geography, and any combination of the above.

6. (Previously Presented) A system for providing multilevel information about video-on-demand services, said system including a multitude of servers for storing video data, a multitude of customers for receiving said video data and viewing said video data on customer video monitors, and a system administrator for configuring and monitoring connections between said servers and said customers, and wherein said video-on-demand services are provided by a service provider to said multitude of customers and enable said customers to choose interactively various programs stored in a video source and to view a selected program at any time on the customer video monitors, the system comprising:

a computer display screen;

means for generating a display, on the computer display screen, of a tree having a plurality of nodes and for displaying video usage patterns of the customers; and

means for embedding in the nodes information about the video-on-demand services-provided to said multitude of customers, including means to enable said system administrator to interact with said nodes of said display to configure and to monitor the connections between said servers and said customer video monitors; and

wherein, when one of the customers requests a video program, the system administrator interacts with the nodes of the display (i) to select one of the servers to provide the requested video program to said one of the customers and (ii) to assign to said one of the customers one or more of a multitude of video data channels to configure a video data path between the selected one of the servers and the video monitor of said one of the customers for transmitting the requested video program from said selected one of the servers to the video monitor of said one of the customers for viewing by said one of the customers, and wherein commercials are provided with the video program, and the commercials are selected based on the displayed video usage patterns.

7. (Original) A system according to Claim 6, wherein the embedding means includes:

means for identifying in a first catalog each of a group of first aspects of video-on-demand services;

means for identifying in a second catalog each of a group of second aspects of video-on-demand services;

means for forming a matrix from the first and second groups; and

means for embedding the matrix in one of the nodes.

8. (Cancelled).

9. (Original) A system according to Claim 6, wherein the embedding means includes means for embedding information in the nodes in the form of matrices.

10. (Original) A system according to Claim 9, wherein the matrices are used to display information about an aspect of video-on-demand service selected from the group comprising:

usage patterns between the supplier of the video services and the consumer, a list of users, user statistics, satisfaction rates, failure rates, failure causes, rates of view to completion, cost monitor information, customer payment information, menus of videos, charge variations, special features and offers, user age, user education, geography, and any combination of the above.

11. (Previously Presented) A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for providing multilevel information about video-on-demand services in a video-on-demand service system, said system including a multitude of servers for storing video data, a multitude of customers for receiving said video data and viewing said video data on customer video monitors, and a system administrator for configuring and monitoring connections between said servers and said customers, and wherein said video-on-demand services are provided by a service provider to the multitude of customers and enable said customers to choose interactively various programs stored in a video source and to view a selected program at any time on the customer video monitors, said method steps comprising:

generating a display, on a computer display screen, of a tree having a plurality of nodes, including displaying video usage patterns of the customers; and

embedding in the nodes information about the video-on-demand services provided to said multitude of customers, including the step of said system administrator interacting with said nodes of said display to configure and to monitor the connections between said servers and said customer video monitors; and

wherein, when one of the customers requests a video program, the system administrator interacts with the nodes of the display (i) to select one of the servers to provide the requested video program to said one of the customers and (ii) to assign to said one of the customers one or more of a multitude of video data channels to configure a video data path between the selected one of the servers and the video monitors of said one of the customers for transmitting the requested video program from said selected one of the servers to the video monitor of said one of the customers for viewing by said one of the customers and for displaying video usage patterns of the customers.

12. (Original) A program storage device according to Claim 11, wherein the embedding step includes the steps of:

identifying in a first catalog each of a group of first aspects of video-on-demand services;

identifying in a second catalog each of a group of second aspects of video-on-demand services;

forming a matrix from the first and second groups; and

embedding the matrix in one of the nodes.

13. (Original) A program storage device according to Claim 12, wherein the step of identifying in the first catalog includes the step of identifying in the first catalog each of a group of users of the video-on-demand service.

14. (Original) A program storage device according to Claim 11, wherein the embedding step includes the step of embedding information in the nodes in the form of matrices.

15. (Original) A program storage device according to Claim 14, wherein the matrices are used to display information about an aspect of video-on-demand service selected from the group comprising:

usage patterns between the supplier of the video services and the consumer, a list of users, user statistics, satisfaction rates, failure rates, failure causes, rates of view to completion, cost monitor information, customer payment information, menus of videos, charge variations, special features and offers, user age, user education, geography, and any combination of the above.

16. (Original) A method as recited in claim 1, wherein the tree is displayed top down.

17. (Original) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for causing provision of multilevel information about relationships between users and items of video-on-

demand services, the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 1.

18. (Previously Presented) A method for representing interconnections of a plurality of elements of a video-on-demand services system, said system including a multitude of servers for storing video data, a multitude of customers for receiving said video data and viewing said video data on customer video monitors, and a system administrator for configuring and monitoring connections between said servers and said customers, and wherein said video-on-demand services are provided by a service provider to the multitude of customers and enable said customers to choose interactively various programs stored in a video source and to view a selected program at any time on the customer video monitors, the method comprising:

providing a first catalog for a first subset of said elements, and providing a second catalog for a second subset of said elements;

creating a matrix of connection cells representing services provided by said service provider to said multitude of customers, each cell formed by an intersection of a pair of elements, wherein a first element of each pair is taken from the first catalog and a second element of each pair is taken from the second catalog, including the step of said system administrator interacting with said cells to configure and to monitor the connections between said servers and said customer video monitors; and

forming a connection representation for at least a subset of the pairs, the connection representation for each cell represents a service provided by said service provider to a respective one of said multitude of customers; and

wherein, when one of the customers requests a video program, the system administrator interacts with the cells of the matrix (i) to select one of the servers to provide the requested video program to said one of the customers and (ii) to assign to said one of the customers one or more of a multitude of video data channels to configure a video data path between the selected one of the servers and the video monitor of said one of the customers for transmitting the requested video program from said selected one of the servers to the video monitor of said one of the customers for viewing by said one of the customers, and wherein commercials are provided with the video program, and the commercials are selected based on displayed video usage patterns of the customers.

19. (Original) A method as recited in claim 18, wherein at least one element is a catalog of sub-elements, and the method further comprises the step of including all sub-elements in the matrix.

20. (Original) A method as recited in claim 18, wherein at least one of the catalogs includes a plurality of sub-catalogs.

21. (Original) A method as recited in claim 18, wherein at least a portion of one catalog is formed using combinatorial operations upon elements of other catalogs.

22. (Original) A method as recited in claim 18, further comprising displaying at least one portion of the matrix.

23. (Original) A method as recited in claim 18, further comprising employing a wizard to form at least a subset of the elements.

24. (Original) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for causing representation of interconnection of a plurality of elements of a video-on-demand system, the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 18.

25. (Previously Presented) An architecture for providing information about a video-on-demand service system, said system including a multitude of servers for storing video data, a multitude of customers for receiving said video data and viewing said video data on customer video monitors, and a system administrator for configuring and monitoring connections between said servers and said customers, and said service system further including a set of video-on-demand elements, wherein said multitude of customers are able to choose interactively various programs from a video-on-demand service provider and to view a selected program at any time on the customer video monitors, the architecture comprising:

a matrix module forming a video-on-demand information system matrix representing services provided by said service provider to said multitude of customers, said matrix having at least one matrix row element and at least one matrix column element, an

intersection of each said at least one matrix row element with each said at least one matrix column element forming a matrix cell representing a service provided by said service provider to a respective one of said multitude of customers;

a set of video-on-demand elements, a first subset of said set having a connection requirement with a second subset of said set;

a first catalog including at least one video-on-demand element forming said at least one matrix row element;

a second catalog including at least one video-on-demand element forming said at least one matrix column element, wherein each matrix cell represents a video-on-demand relationship between each video-on-demand element of the first catalog and each video-on-demand element of the second catalog to enable systematic cooperation among video-on-demand elements according to a video-on-demand requirement; and

means to enable said system administrator to interact with the matrix module to configure and to monitor the connection between said servers and said customer video monitors; and

wherein, when one of the customers requests a video program, the system administrator interacts with the cells of the matrix (i) to select one of the servers to provide the requested video program to said one of the customers and (ii) to assign to said one of the customers one or more of a multitude of video data channels to configure a video data path between the selected one of the servers and said one of the customers for transmitting the requested program from said selected one of the servers to the video monitor of said one of the customers for viewing by said one of the customers, and wherein commercials are

provided with the video program, and the commercials are selected based on displayed video usage patterns of the customers.

26. (Original) An architecture as recited in claim 25, wherein at least one video-on-demand element is a catalog of video-on-demand sub-elements.

27. (Original) An architecture as recited in claim 25, wherein at least one video-on-demand element is a catalog of elements only peripherally related to video-on-demand.

28. (Original) An architecture as recited in claim 27, wherein the catalog of elements only peripherally related to video-on-demand includes an item selected from the group of items including customer habits, customer credit card and/or internet purchases, customer's friends, and customer product data.

29. (Previously Presented) A method of providing multilevel information about a plurality of video-on-demand related entities and resources, wherein said video-on-demand related entities and resources in a video-on-demand service system, said system including a multitude of servers for storing video data, a multitude of customers for receiving said video data and viewing said video data on customer video monitors, and a system administrator for configuring and monitoring connections between said servers and said customers, and wherein said video-on-demand related entities and resources are provided by a service provider to said multitude of customers and enable said customers to choose interactively

various programs stored in a video source and to view a selected program at any time on the customer video monitors, the method comprising the steps:

generating a display, on a computer display screen, of a tree having a plurality of nodes, including displaying video usage patterns of the customers; and

embedding in the nodes information about a plurality of the video-on-demand related entities and resources provided to said multitude of customers, including the step of said system administrator interacting with said nodes of said display to configure and to monitor the connections between said servers and said customer video monitors; and

wherein, when one of the customers requests a video program, the system administrator interacts with the nodes of the display (i) to select one of the servers to provide the requested video program to said one of the customers and (ii) to assign to said one of the customers one or more of a multitude of video data channels to configure a video data path between the selected one of the servers and the video monitor of said one of the customers for transmitting the requested video program from said selected one of the servers to the video monitor of said one of the customers for viewing by said one of the customers, and wherein commercials are provided with the video program, and the commercials are selected based on the displayed video usage pattern.

30. (Original) A method as recited in claim 29, wherein the plurality of video-on-demand related entities and resources include an entity and/or resource selected from: video-on-demand providers; video-on-demand composers/manufacturers; video-on-demand related sellers; video-on-demand advertisers; video manufacturers; video databases; video renters; and any combination of the above.

31. (Original) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for causing provision of multilevel information about relationships between users and items of a plurality of video-on-demand related entities and resources, the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 30.

32. (Original) An article of manufacture as recited in claim 31, wherein the video-on-demand resources are holdings of groups of products.

33. (Original) An article of manufacture as recited in claim 31, wherein the relationships include inventory information.

34. (Original) A method as recited in claim 1, further comprising implementing at least one process taken from a group of processes including: matrix and/or element expansion; logical set manipulation of catalog elements to form changed and/or new matrices, changed and/or new elements, and/or changed and/or new catalogs; catalog manipulation and/or combination; formation of one or more super catalogs and/or super-elements representing a catalog of catalogs; display of a plurality of trees and/or portions of trees in a variety of tree formats and shapes; and formation and/or manipulation of sub-catalogs and/or sub-elements from one or more catalogs, matrices and/or elements.

35. (Previously Presented) A method according to claim 18, wherein:

each element of the first catalog corresponds to a primary server;
each element of the second catalog corresponds to a secondary server; and
each of the intersections of the matrix represents a logical connection of a presentation flowing from one primary server to one secondary server.

36. (Previously Presented) A method according to claim 35, wherein multiple presentations are flowing between the one primary server and the one secondary server, and said multiple presentations are represented by a stack of blocks shown on said each of the intersections, each of said blocks representing a different one of said multiple presentations.